

Application No. 10/664,727 71601
Amendment dated October 31, 2005
Reply to Office action dated August 9, 2005

Amendments to the Drawings:

The attached sheet of drawings includes changes to the Figure. The Replacement Sheet is intended to replace the original Figure. In the replacement Figure, previously omitted reference numbers 54, 56, and 62 have been added. Also included is an Annotated Sheet Showing Changes, in which the omitted reference numbers are drawn by hand.

Attachment: Replacement Sheet
 Annotated Sheet Showing Changes

REMARKS

Claims 1, 2, 4-11, and 13-23 are pending in the application. Claims 3 and 12 are canceled herein, without prejudice or disclaimer as to the subject matter of the canceled claims.

Claims 1, 4, 5, 8, 9, 10, 13, 14, 15, and 20 are amended herein.

Claims 21-23 are newly provided, and find support, for example, at page, 12, first full paragraph.

Drawings

The drawings were objected to in the Office Action as not containing reference numbers 54, 56, and 62. It is therefore proposed that the original Figure be replaced with the accompanying Replacement Sheet in which these reference numbers have been added, support for which can be found in the cited portions of the specification on pages 12 and 13, which explains that the loading bin 40 has a receiving opening 54 and a dispensing opening 56, the receiving opening 54 being disposed axially above dispensing opening 56. Reference number 54 thus has been positioned to indicate the receiving opening 54 at the top of each of the loading bins 40, and reference number 56 to indicate the dispensing opening located at the bottom of each of the loading bins 40. Reference number 62 refers to the blend 62 of solid material in the loading bin 40, and the reference number has thus been positioned to indicate the contents of each of the loading bins 40. This Amendment is accompanied also by an Annotated Sheet Showing Changes.

The drawings were further objected to because the reference number 10 in the drawings was not specifically mentioned in the description. This Amendment therefore includes a proposed Amendment to the Specification, in which Applicants propose that

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the first full paragraph on page 5 of the application be amended to indicate that reference number 10 refers to the system 10 depicted in the Figure, support for which can be found in the drawing taken in light of the specification.

Specification

The Abstract and the disclosure were objected to in the Office Action because the term "property modifying component" was abbreviated in certain instances as "PCM". This Amendment is therefore accompanied by a proposed Amendment to the Specification, in which it is proposed that the Abstract, the third paragraph of page 10, and the first full paragraph of page 13, all be replaced with the replacement paragraphs to correct the abbreviation to "PMC".

Claims

The claims were objected to as containing abbreviations, and for other informalities. The claims have therefore been amended to attend to these and other informalities. Entry and favorable consideration are therefore requested.

Claims 3-5 and 12-14 were rejected in the Office Action as being indefinite. Claims 3 and 12 have been canceled, and the dependencies of claims 4, 5, 13, and 14 changed to the respective independent claims.

The term "substantial different" in claims 4 and 13 was objected to as being a relative term, and the claims have therefore been amended to recite instead the word "different".

Claim Rejections – 35 USC § 103

Claims 1, 2, 6, 10, 11, 15 and 19 were rejected in the Office Action under 35 USC § 103(a) as being unpatentable over Harvey (U.S. Pat. No. 3,700,140), taken with Nichols et al. (U.S. Pat. No. 5,876,644). Applicants respectfully traverse the rejection.

The Harvey patent is seen to relate to the packing of catalyst material in tubular reactors, and specifically, to obtaining predetermined catalyst concentration profiles (col. 2, lines 52-55), a cited problem in the art being establishing a concentration gradient of catalyst/diluent along the length of a reactor tube, and especially in those cases in which a series of tubes are to be packed at the same time (col. 1, lines 27-32), such as when using a multitubular reactor (col. 1, lines 33-38). Thus, the Harvey patent does not relate to establishing homogenized blends of materials, but rather to establishing concentration gradients along the lengths of tubes. Since the Harvey patent relates to obtaining heterogeneous catalyst profiles, there is, of course, no teaching or suggestion of forming a uniform blend of a virgin PET with a material that might be used to modify it.

The Harvey patent likewise does not teach or suggest the use of bulk containers suitable for delivery to an end user, nor does it teach or suggest a step of transporting a blend to an end user.

Nor does the Harvey patent provide for a loading bin, as provided in claims 7, 16, and 20, optionally containing its own mixer, as provided in new claims 21-23.

The Nichols et al. patent is seen to relate to polyester manufacture, and primarily to melt blending a melt of post-consumer polyester with a melt of virgin polyester *prepolymer*, solidifying and pelletizing the blended melt while the virgin polyester prepolymer *remains* as prepolymer, and thereafter polymerizing the solid blended pellets in the solid state. See, for example, the Abstract. Similarly, in the cited portion of Nichols et al. relating to a blend of pellets, col. 5, lines 25 *et seq.*, the pellets are likewise comprised of prepolymers, since they also must afterward be subjected to solid state polymerization to produce fully polymerized polyester pellets. Nichols et al. therefore does not relate to blends of virgin polyethylene terephthalate polymer and post-consumer recycled PET, but rather to blends of prepolymers that must afterward be solid-stated prior to use.

Because the pellets of Nichols et al. are not yet fully polymerized, there is no teaching or suggestion of providing a bulk container for delivery of the blend to an end user, nor may the blend of Harvey be transported to an end user, since it is not yet fully polymerized. Thus, contrary to the present invention related to blending bulk quantities shortly before or at the time they are to be transported, the cited portion of Nichols relates instead to a single step in the manufacturing of polyester polymers that include recycled material.

Nor does Nichols et al. provide for a loading bin, as provided in claims 7, 16, and 20, optionally containing its own mixer, as provided in new claims 21-23.

Because Harvey relates to means for obtaining a concentration gradient of two ingredients along the length of a reactor tube rather than to obtaining a homogenized blend, Applicants respectfully submit that there would be no motivation to combine the reference with Nichols et al. relating to prepolymer pellet blends, other than using impermissible hindsight. Applicants further submit that, even if the references had been properly combined, which Applicants submit they are not, the present invention would nonetheless not be obtained, because Harvey does not relate to obtaining homogenized blends of polymers and modifying components, and because Nichols et al. neither teach nor suggest blends of polymer pellets with PCR, but rather blends of *prepolymers*. Further deficiencies of the cited references have already been noted above.

Applicants therefore respectfully submit that the rejection is overcome, and respectfully request that the rejection be withdrawn.

Claims 1, 2, 6-11, and 15-20 were rejected in the Office Action under 35 USC §103(a) as being unpatentable over Powers et al., U.S. Pat. No. 6,403,748 taken with Nichols et al. as above. Applicants respectfully traverse the rejection.

Powers et al. is seen to relate to a set of trim forward bins to set aside, distribute, and allocate portions of granular product made in a continuous olefin polymerization reactor. See the Abstract. The reference thus does not relate to virgin PET nor to components that may be used to modify it.

Nor does Powers et al. provide for a loading bin, as provided in claims 7, 16, and 20, optionally containing its own mixer, as provided in new claims 21-23.

As discussed Nichols et al. relates to the blending of prepolymers that must afterward be solid-stated prior to use. Because the pellets of Nichols et al. are not yet fully polymerized, there is no teaching or suggestion of providing a bulk container for delivery of the blend to an end user, nor may the blend of Nichols be transported to an end user, since it is not yet fully polymerized. Thus, contrary to the present invention related to blending bulk quantities shortly before or at the time they are to be transported, the cited portion of Nichols et al. relates instead to a single step in the manufacturing of polyester polymers that include recycled material. Nichols et al. likewise is silent as to the presence or use of a loading bin, as provided in claims 7, 16, and 20, optionally containing its own mixer, as provided in new claims 21-23.

In light of the foregoing, Applicants respectfully submit that the rejection is overcome, and respectfully request that the rejection be withdrawn.

Claims 2-4 and 12 -14 were rejected in the Office Action under 35 USC §103(a) as being unpatentable over Harvey taken with Nichols et al. applied to claims 1 and 10 as above, further in view of Moller, U.S. Pat. No. 5,110,521. Applicants respectfully traverse the rejection.

Claims 3 and 12 have been canceled from the application, without prejudice or disclaimer, so that the rejection as to these claims is now moot.

The deficiencies in combining Harvey with Nichols et al. have already been addressed above. Because independent claims 1 and 10 are seen to be patentable in view of the combination of Harvey with Nichols et al., the claims depending from them are likewise seen to be patentable whether or not the Moller reference is applied, for example claims 4 and 13 which provide that the PMC blend has a different characteristic than molded unmodified VPET. However, with respect to the Moller reference, claims 2 and 11 of the present application provide that the polymer modifying component comprises post-consumer recycled PET, a feature neither disclosed nor

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suggested in Moller, which uses regrind material made from rejected moldings and other scrap (col. 2, lines 55-61).

Further, while claim 14 provides that the PMC component may be selected from the group consisting of VPET reheat characteristic modifying agents, VPET crystallization rate modifying agents, VPET UV (ultraviolet light) cutoff wavelength modifying agents, VPET acetaldehyde (AA) reducing and/or scavenging agents, VPET oxygen barrier and/or scavenging agents, VPET gas barrier property modifying agents, VPET natural stretch ratio modifying agents, VPET coefficient of friction modifying agents, and VPET processing agents, not a single member from this group is taught in the Moller reference.

In light of the foregoing, Applicants respectfully submit that the rejection is overcome.

Claims 2-4 and 12 -14 were rejected in the Office Action under 35 USC §103(a) as being unpatentable over Powers et al. taken with Nichols et al. as applied to claims 1 and 10 above, and further in view of Moller, U.S. Pat. No. 5,110,521. Applicants respectfully traverse the rejection.

Claims 3 and 12 have been canceled from the application, without prejudice or disclaimer, so that the rejection as to these claims is now moot.

The deficiencies in combining Powers et al. with Nichols et al. have already been addressed above. Because independent claims 1 and 10 are seen to be patentable in view of the combination of Powers et al. with Nichols et al., the claims depending from them are likewise seen to be patentable whether or not the Moller reference is applied, for example claims 4 and 13 which provide that the PMC blend has a different characteristic than molded unmodified VPET. However, with respect to the Moller reference, claims 2 and 11 of the present application provide that the polymer modifying component comprises post-consumer recycled PET, a feature neither disclosed nor suggested in Moller, which uses regrind material made from rejected moldings and other scrap (col. 2, lines 55-61).

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In light of the foregoing, Applicants respectfully submit that the rejection is overcome.

In summary, Applicants believe the application to be in condition for allowance. Accordingly, the Examiner is respectfully requested to reconsider the rejection(s), enter the above amendment, remove all objections, and pass the application to issuance.

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Respectfully submitted,

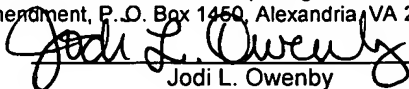


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31 October 2005
Date

CERTIFICATE OF MAILING UNDER 37 CFR 1.8(a)

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Mail Stop Amendment, P.O. Box 1450, Alexandria, VA 22313-1450.


Jodi L. Owenby

October 31, 2005
Date

